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MEMORANDUM FOR ALL NER WING CCs AND SEs

FROM: NER/SE

SUBJECT: Lyme Disease

1. With spring rapidly approaching here in the northeast, Lyme Disease season begins as well. With our ground teams going into the deep woods for routine exercises and in search of downed aircraft and lost hikers, it's important for all of us to understand more about this potentially serious disease. What follows is brief overview of its cause, symptoms and new treatments, including the newly-released Lyme Disease vaccine.

2. **Background:** Lyme Disease was first recognized in the United States in 1975, after a mysterious outbreak of arthritis near Old Lyme, Connecticut. Since then, reports of Lyme Disease have increased dramatically, and the disease has become an important public health problem here in the northeast. Here's an example of how widespread last year's outbreak was:

<u>State</u>	<u>Number Of Confirmed Cases In 1998</u>
CT	3,104
ME	447
MA	321
NH	47
NJ	2,190
NY	5,301
PA	2,814
RI	534
VT	26

3. **How the disease is spread:** Lyme Disease is spread by the bite of ticks infected with the disease. Ticks can attach to any part of the human body but often attach to the more hidden and hairy areas such as the groin, armpits, and scalp. Ticks search for host animals from the tips of grasses and shrubs (not from trees) and transfer to animals or persons that brush against vegetation. Ticks only crawl; they do not fly or jump.

4. **Symptoms and signs of Lyme disease:** The early stage of Lyme Disease is usually marked by one or more of the following symptoms and signs:

- Fatigue
- Chills and fever
- Swollen lymph nodes in armpit or groin
- Headache
- Muscle and joint pain
- Characteristic "bulls-eye" skin rash

The skin rash is a red circular patch that usually appears at the site of the bite 3 days to 1 month after the bite of an infected tick. The patch then expands, often to a large size. Sometimes many patches appear, varying in shape, depending on their location. Common sites are the thigh, groin, trunk, and the armpits. The center of the rash may clear as it enlarges, resulting in a bulls-eye appearance. The rash may be warm, but it usually is not painful. Not all rashes that occur at the site of a tick bite are due to Lyme Disease, however. For example, an allergic reaction to tick saliva often occurs at the site of a tick bite, similar to the reaction to a mosquito bite. The resulting rash can be confused with the rash of Lyme Disease. Allergic reactions to tick saliva usually occur within hours to a few days after the tick bite, usually do not expand, and disappear within a few days.

Later symptoms and signs of Lyme Disease may not appear until weeks, months, or years after a tick bite:

- Arthritis is most likely to appear as brief bouts of pain and swelling, usually in one or more large joints, especially the knees.
- Nervous system abnormalities can include numbness, pain, paralysis of the facial muscles (usually on one side), and meningitis (fever, stiff neck, and severe headache).
- Less frequently, irregularities of the heart rhythm occur.

5. **Diagnosis:** Lyme Disease is often quite difficult to diagnose because its symptoms and signs mimic those of many other diseases. The fever, muscle aches, and fatigue of Lyme Disease can easily be mistaken for flu or infectious mononucleosis. Joint pain can be mistaken for other types of arthritis, such as rheumatoid arthritis, and neurologic signs can mimic those caused by other conditions, such as multiple sclerosis.

6. **Treatment:** The treatment of choice is usually antibiotics. Patients treated in the early stages with antibiotics usually recover rapidly and completely. Varying degrees of permanent damage to joints or the nervous system can develop in untreated patients.

7. **Prevention:** The chances of being bitten by a tick can be decreased with a few simple precautions. Since we can't always avoid tick-infested areas when on a mission or when vacationing with family or friends, here are some common-sense precautions:

- When possible, wear light-colored clothing so ticks can be spotted more easily.
- Blouse pant legs into socks or boots and undershirt into pants.
- Tape or otherwise seal the area where pants and socks meet so that ticks cannot crawl under clothing. BDU blousing bands are ideal for this.
- Spray insect repellent containing DEET on clothes and on exposed skin other than the face; or treat clothes (especially pants, socks, and boots) with repellents containing Permethrin, which kills ticks on contact.
- Wear a hat and a long-sleeved shirt for added protection.
- Walk on trails whenever possible to avoid overhanging grass and brush.

After being outdoors, remove clothing and wash and dry it at a high temperature; inspect body carefully and remove attached ticks with tweezers, grasping the tick as close to the skin surface as possible and pulling straight back; avoid crushing the tick's body.

8. **New Vaccine:** The Lyme disease vaccine does not protect all recipients against infection and offers no protection against other tick-borne diseases, so vaccinated individuals should continue to practice personal protective measures against ticks and seek early diagnosis and treatment of suspected tick-borne infections. The vaccine requires three injections - an initial dose, a second following one month later and a third dose 12 months after the first. Vaccine administration should be timed so that the second dose of the vaccine (year one), and the third dose (year two) are given several weeks before the beginning of the tick season, which usually begins in April in our part of the country.

You should seek the advice of your physician regarding whether you and your family should receive this treatment. Decisions regarding the use of vaccine should be based on individual assessment of the risk of exposure to infected ticks, and on careful consideration of the relative risks and benefits of vaccination compared to other protective measures, including early diagnosis and treatment of Lyme disease.

9. **More Information:** If you think you or someone in your family may have been bitten by a tick, speak to your family doctor. For further information, you can learn more about Lyme Disease at any of the following Internet web sites:

The University Of Connecticut
<http://www.ucc.uconn.edu/~wwwlyme/>

The American College of Physicians
<http://www.acponline.org/lyme/>

The Centers For Disease Control
<http://www.cdc.gov/ncidod/diseases/lyme/>

The Lyme Disease Network
<http://www.lymenet.org/>

The American Family Physician
<http://www.aafp.org/aafp/970800ap/lymedis.html>

The Lyme Disease Foundation
<http://www.lyme.org/>

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